MERRILL'S CHAPTER TWO
GENERAL ANATOMY AND RADIOGRAPHIC POSITIONING TERMINOLOGY (132 Points)

Daniel Linares — 3/30/26
Name **Date**

1. **SAGITTAL plane divides body into** Right and Left **(1 Point)**
2. **CORONAL plane divides body into** Front and Back **(1 Point)**
3. **TRANSVERSE plane divides body into** Superior and inferior **(1 Point)**
4. **List the contents of THORACIC CAVITY (6 Points)**
   a. Pleural membranes
   b. Lungs
   c. Trachea
   d. Esophagus
   e. Pericardium
   f. Heart and great vessels
5. **List the contents of ABDOMINAL CAVITY (exclude major blood vessels) (9 Points)**
   a. Peritoneum
   b. Liver
   c. Gallbladder
   d. Pancreas
   e. Spleen
   f. Stomach
   g. Intestines
   h. Kidneys
   i. Ureters

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6. List the contents of PELVIC CAVITY (3 Points)

a. Rectum

b. Urinary bladder

c. Reproductive System

7. Largest organ in the body, located in the RUQ The Liver **(1 Point)**

8. QUADRANT where appendix is located? Right Lower Quadrant **(1 Point)**

9. EPIGASTRIUM region identified by number Two **(1 Point)**

10. List the vertebral level(s) associated with the surface landmark (5 Points)

SURFACE LANDMARK	VERTEBRAL LEVEL(S)
a. Jugular notch	T2, T3
b. Inferior angle of scapula	T7
c. Xiphoid process	T9, T10
d. Iliac crest	L4, L5
e. Vertebral prominens	C7, T1

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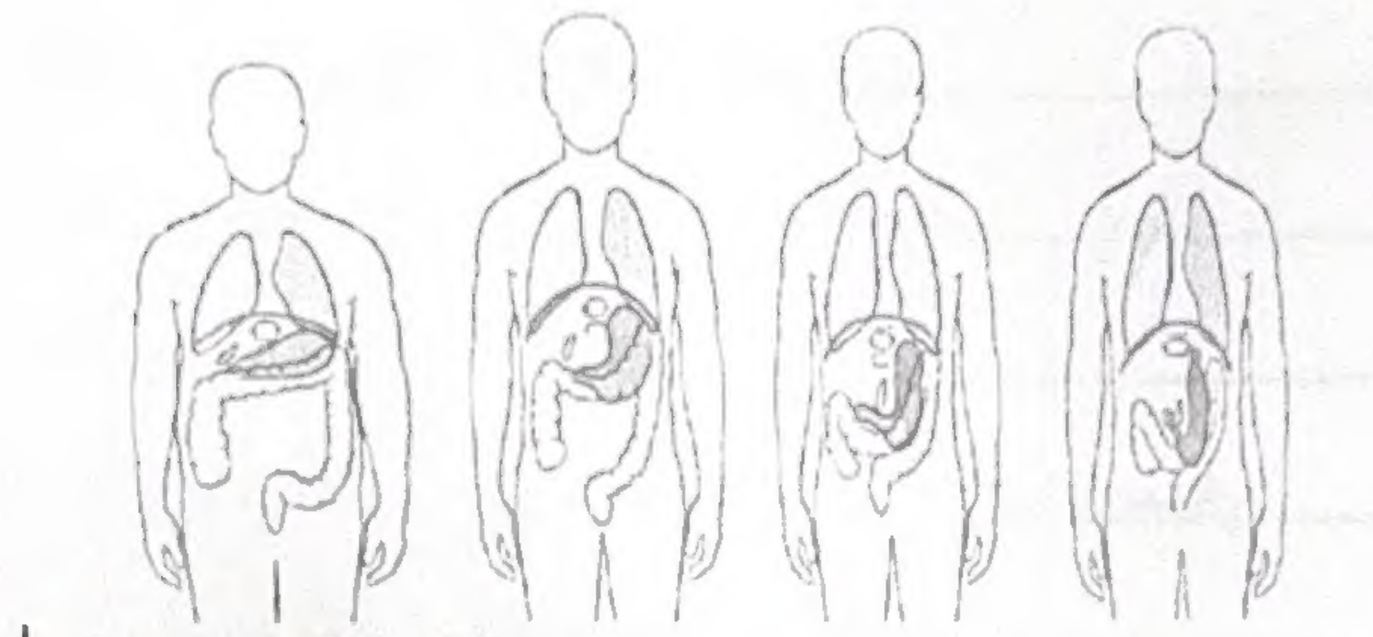
11. Label FOUR MAJOR TYPES OF BODY HABITUS and % FREQUENCY of each (8 Points)



12. List FIVE CLASSIFICATIONS OF BONES and give 1-2 examples of each (10 Points)

a. Long Bone **Example:** Femur and humerus

b. Short Bone **Example:** Carpal bones and tarsal bones

c. Flat Bone **Example:** Sternum and Cranium

d. Irregular Bone **Example:** Vertebrae and Pelvis

e. Sesamoid Bone **Example:** Patella

13. List SIX TYPES OF SYNOVIAL JOINTS and give 1-2 examples of each (12 Points)

a. Gliding **Example:** Intercarpal Joints and intertarsal joints

b. Hinge **Example:** Elbow and Knee

c. Pivot **Example:** Radius and Ulna

d. Ellipsoid **Example:** Radiocarpal (wrist) Joint

e. Saddle **Example:** Carpometacarpal Joint

f. Ball and Socket **Example:** Hip and Shoulder

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14. Define the following bone markings or features (15 Points)

a. **Foramen** Hole in a bone for transmission of Blood Vessels and nerves

b. **Fossa** Pit, fovea, or Hollow Space

c. **Notch** Indentation into border of a bone

d. **Meatus** Tube like passageway

e. **Condyle** Rounded process at an articular extremity

f. **Epicondyle** Projection above a Condyle

g. **Facet** Small, Smooth-Surfaced process for articulation with another Structure

h. **Malleolus** Club Shaped Process

i. **Styloid** long, Pointed Process

j. **Trochanter** Either of two large, rounded, and elevated processes (greater or major and lesser or minor) located at junction of neck and Shaft of femur.

k. **Tubercle** Small, rounded, and elevated process

l. **Tuberosity** Large, rounded, and elevated Process

m. **Crest** Ridgelike Process

n. **Spine** Sharp Process

o. **Coracoid or coronoid** Beak-like or crown-like process

15. Define the following fracture terms (3 Points)

a. **Fracture** A break in bone, Cartilage or both and associated with Soft tissue injury

b. **Comminuted fracture** Two or more bony fragments have Separated

c. **Pathologic fracture** Fracture through bone weakened by a localized or Systemic disease process

16. Torus and greenstick fractures seen in (CIRCLE ONE) ADULTS CHILDREN (1 Point)

17. Compression fractures occur where? Primarily in the Spine **(1 Point)**

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18. Define the following terms (16 Points)

a. **Anterior (ventral)** Forward or front Part of body or forward Part of organ

b. **Posterior (dorsal)** Back Part of Body or organ

c. **Caudad** refers to parts away from the head of the body

d. **Cephalad** refers to parts towards the head of the body

e. **Inferior** refers to nearer the feet or situated below

f. **Superior** refers to nearer the head or situated above

g. **Contralateral** refers to part or parts on opposite Side of body

h. **Ipsilateral** refers to part or parts on Same Side of body

i. **Lateral** refers to parts away from Median Plane of body or away from the middle of another body part to the left or right

j. **Medial** refers to parts toward the median plane of body or toward the middle of another body part

k. **Distal** refers to parts farthest from point of attachment, Point of reference, origin, or beginning away from center of body

l. **External** parts outside an organ or outside of body

m. **Internal** Parts within or on the inside of an organ

n. **Dorsum** The top or anterior Surface of the foot or to the back or posterior Surface of hand

o. **Palmar** refers to the palm of the hand

p. **Plantar** refers to the Sole of the foot

19. Define the following terms (4 Points)

a. **PROJECTION** Path of the Central ray as it exits the x-ray tube through the Patient to the IR. entrance and exit points of the body

b. **POSITION** Position of Patient relative to image receptor. Placement of the body or part in relation to the table or IR

c. **Path of the central ray (CR)** How the Central ray travels through anatomy (Projection)

d. **Position of patient relative to the image receptor (IR)** General body position of Patient (Position)

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20. Indicate whether the following terms are a PROJECTION or a POSITION (7 Points)

a. Posteroanterior (PA) Projection

b. Upright Position

c. RPO / LPO Position

d. Lateral Projection / Position

e. Supine Position

f. Anteroposterior (AP) Projection

g. Lateral – note that "lateral" is BOTH a projection and a position

h. Left lateral Position

21. For each ESSENTIAL PROJECTION, describe path of the central ray (CR) (5 Points)

a. AP CR enters the anterior Surface and exits posterior

b. PA CR enters the posterior Surface and exits the anterior

c. Axial – How much is central ray (CR) angled CR longitudinal angle of 10 degrees or more

d. Lateral CR enters one Side of the body, Passing transversely along the Coronal plane

e. Oblique CR enters from Side angle

22. Describe how the patient is for each of the GENERAL BODY POSITIONS (6 Points)

a. Upright Erect or Vertical

b. Seated Upright but Sitting on a Stool

c. Recumbent Lying down in any position

d. Supine Lying on the back

e. Oblique Body rotated So that the Coronal plane is not parallel with the table or IR

f. Lateral Named according to the Side of patient placed Closest to the IR

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23. Define the following BODY MOVEMENT TERMS (15 Points)

a. **Abduct / abduction** Movement of a part away from the Central axis of the body

b. **Adduct / adduction** Movement of a part toward the Central axis of the body

c. **Extension** Straightening of a joint

d. **Flexion** Bending of a joint

e. **Hyperflexion** Forced overflexion

f. **Hyperextension** Forced or exlessive extension

g. **Eversion** Outward turning of the foot at the ankle

h. **Inversion** Inward turning of the foot at the ankle

i. **Supination** Rotation of forearm so that the palm is up

j. **Pronation** Rotation of forearm so that palm is down

k. **Rotation** Turning of the body or part around its axis. Either medial or lateral

l. **Internal / medial rotation** Rotation of a limb toward midline

m. **External / lateral rotation** Rotation of a limb away from midline

n. **Circumduction** Circular movment of a limb

o. **Deviation** A turning away from the regular or Standard course

ASSIGNMENT GRADE SUMMARY: _____ / 132 Points

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